

Remarks

Support for the above-requested amendments to claim 1 is found at least in paragraphs [0039] and [0041] and original claim 14. Claims 8 and 15 has been amended to coincide with amended claim 1. Claims 12, 16, 19, 20, 22, and 23 were amended for various grammatical reasons. Support for the amendments to claim 25 is found at least at paragraphs [0044] – [0046]. Support for the amendments to claim 26 is found at least at paragraph [0055]. Support for the amendments to claim 51 is found at least in paragraphs [0021], [0022], [0036], [0041], and [0056]. Claims 56 and 58 have been amended to recite “secondary coating” to more distinctly describe the three separate binders recited in independent claims 51 and dependent claim 56. Support for this change in nomenclature for “the secondary binder resin” is found at least in paragraphs [0021], [0022], [0036], and [0056]. Support for the amendments to claim 57 is found at least at paragraphs [0054] and [0056], claim 23 as originally presented, and FIG. 4B. The subject matter of claims 13, 14, and 59 has been incorporated into claim 1 and claims 13, 14, and 59 have been canceled accordingly. At least claims 12, 15, 16, 19, 20, 22, 23, 56, and 58 were not amended for any reason related to patentability.

New independent claim 60 is supported throughout the specification, such as, for example, in paragraphs [0010], [0020], [0038], and [0041]. Support for new claim 61 is found at least in paragraph [0039]. New claim 62 is supported at least by paragraph [0038]. New claim 63 is supported at least by paragraphs [0010] and [0038]. Support for new claim 64 is found at least in paragraphs [0010] and [0041]. New claim 65 is supported at least by paragraph [0041]. New claim 66 is supported at least by paragraphs [0044] and [0046]. Support for new claim 67 is found at least in paragraph [0047]. New claim 68 is supported at least by paragraphs [0052] and [0053]. New claim 69 is supported at least by paragraph [0052] and claim 24 as originally filed. New claim 70 is supported at least by paragraph [0054]. Support for new claims 71 and 72 is found at least in paragraph [0040]. New claim 73 is supported at least by paragraph [0052].

No question of new matter arises and entry of the above-requested amendments and new claims is respectfully requested. Claims 1, 4 – 6, 8 – 12, 15 – 28, and 51 – 73 are before the Examiner for consideration.

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Formal Matter

As shown above, Applicants have added new claims 60 – 73 by amendment (*i.e.*, fourteen claims). In the previous Amendment filed in response to the Office Action dated October 7, 2005, Applicants added new claims 51 – 59 (*i.e.*, nine claims). Thus, twenty-three new claims in total have been added to this application. Additionally, claims 2, 3, 7, 13, 14, 29 – 50, and 59 (twenty-eight claims in total) have been canceled without prejudice. Because the total number of claims Applicants are submitting for examination (*i.e.*, forty-five claims) is not greater than the total number of claims previously presented and paid for (*i.e.*, fifty claims), Applicants respectfully submit that no additional filing fees are required for newly added claims 60 - 73.

In addition, Applicants respectfully submit that there are no fees required for new independent claim 60 because the total number of independent claims present in the application (*i.e.*, three independent claims) does not exceed the total amount of independent claims previously paid for (*i.e.*, six independent claims). Furthermore, because support for newly added claims 60 – 73 is found in throughout the specification, as identified in the opening paragraph of the Remarks, Applicants respectfully submit that these newly added claims do not contain any new matter.

Rejection under 35 U.S.C. §112, first paragraph

Claim 56 has been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner asserts that claim 56 requires a “third binder resin” and that the specification does not provide support for this limitation. Therefore, the Examiner concludes that the “third binder resin” is new matter.

Applicants respectfully disagree with the Examiner and assert that there are three binder resins present in at least one embodiment of the present invention. The “first binder resin” is described at least in paragraphs [0020], [0021], [0033], [0034], [0049], and [0054] and is depicted in FIGS. 1, 2A, 2B, 4A, and 4B as reference numeral 16. A “secondary binder resin” or “secondary coating” is depicted in FIGS. 1, 2B, and 4B as reference numeral 90 and is described as such at least in paragraphs [0021], [0022], [0036], and [0056]. The “third binder resin” recited in claim 56 is described in the specification as a “second low viscosity binder” or “secondary binder” in paragraphs [0054] and [0056] and is represented in FIGS. 4A and 4B by reference numeral 216. Thus, Applicants respectfully submit that there

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are indeed three separate and distinct binders (*i.e.*, the first binder resin, the secondary binder resin, and the second binder) described in the specification.

In order to describe the three separate binder resins described in the specification with more specificity and to expedite the allowance of this application, Applicants have amended claim 51 and claims dependent therefrom to recite a "secondary coating" as recited in paragraphs [0036] (discussing FIG. 1) and [0056] (discussing FIG. 4B) of the specification. Applicants have also amended claim 56 to recite a "second binder resin" to further clarify the recited binder resin.

In view of the above, Applicants submit that amended claim 56 is fully supported by the specification and respectfully request reconsideration and withdrawal of this rejection.

Rejection under 35 U.S.C. §103(a)

Claims 1, 8 - 12, 15 - 21, 23 - 28, 51 - 55, and 57 - 59 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2005/0202742 to Smith, *et al.* ("Smith 2005") in view of U.S. Patent Application No. 2002/0151240 to Smith, *et al.* ("Smith 2002"). The Examiner asserts that Smith 2005 discloses a pre-coated mat formed of chopped nonwoven glass strands bound together with a resin binder. The pre-coated mat is used for preparing a gypsum board. It is asserted that the coating composition described in Smith 2005 includes a polymer latex adhesive (SBR), an inorganic adhesive binder, and mineral pigments. The polymer latex is present in the coating composition in an amount from 1 - 17% by weight and the filler is present in an amount from 75 - 99% by weight. With respect to the reinforcing agent, it is asserted that the use of mica is disclosed. The Examiner states that Smith 2005 discloses the invention except for teaching that the mat is mesh and that a coated secondary glass fabric is layered onto the mesh.

In this regard, the Examiner asserts that Smith 2002 discloses a composite facer that includes a glass scrim reinforcement that is bonded to a nonwoven mat with an acrylic adhesive. The nonwoven mat may contain polyester or polyolefin fibers. The Examiner notes that the acrylic adhesive of Smith 2002 has been equated to the coating on the veil of the present invention.

Initially, Applicants submit that claim 59 has been canceled without prejudice, thereby rendering the rejection of this claim moot.

In addition, Applicants respectfully direct the Examiner's attention to independent claims 1 and 51 and submit that claims 1 and 51, as amended, define gypsum facing materials that are not taught or suggested by the combination of Smith 2005 and Smith 2002. In particular, the combination of Smith 2005 and Smith 2002 fails to teach or suggest gypsum facing materials that include a secondary binder resin (claim 1) or a secondary coating (claim 51) applied to a randomly oriented open mesh filament network where the secondary binder resin (claim 1) or secondary coating (claim 51) includes a fairly low glass transition organic binder, at least one filler, and at least one reinforcing agent that may be acicular man made fibers and/or fibrous reinforcement agents as recited in amended claims 1 and 51.

Smith 2005 discloses a pre-coated fiber mat for making a fiber mat-faced gypsum board. (*See, e.g.*, Abstract and paragraph [0001]). The coating on the fiber mat includes a mineral pigment or filler, an organic binder (preferably a hydrophobic UV-resistant polymer latex adhesive), and optionally, a second binder of an inorganic adhesive. (*See, e.g.*, paragraphs [0001], [0026], and [0042]). Of the two essential components, namely, the organic binder and the pigment or filler material, the organic binder forms at least 1 to about 17% by weight. (*See, e.g.*, paragraph [0042]). The organic adhesive binder includes materials such as styrene-butadiene-rubber (SBR). (*See, e.g.*, paragraph [0046]). The mineral pigment or filler forms the majority of the coating composition (*i.e.*, 75 – 99% by weight) and is provided in particulate form. (*See, e.g.*, paragraphs [0043] and [0045]). Examples of filler materials include calcium carbonate, clay, sand, mica, gypsum, and antimony oxide. (*See, e.g.*, paragraph [0044]). The optional inorganic adhesive binder is used in combination with the polymer adhesive latex binder in the coating composition and includes materials such as calcium oxide, calcium silicate, calcium sulfate, magnesium oxychloride, magnesium oxysulfate, aluminum hydroxide, and other complex inorganic binders of some Group IIA elements. (*See, e.g.*, paragraph [0052]). Inorganic pigment or filler materials inherently containing some naturally occurring inorganic adhesive binder are preferred in making the coated mat. (*See, e.g.*, paragraph [0055]).

Applicants submit that there is no teaching or suggestion of acicular man made fibers or fibrous reinforcement agents within the four corners of Smith 2005. As amended, claims 1 and 51 require that the coating compositions contain a fairly low glass transition organic binder, at least one filler, and at least one acicular man made fiber or fibrous reinforcing agent. Smith 2005 teaches a composition that contains, as essential components, a mineral

pigment or filler in particulate form (see paragraph [0045] of Smith 2005) and an organic binder. The essential organic binder and optional inorganic binder are not acicular man made fibers or fibrous reinforcement agents. Additionally, there is no teaching or suggestion that the mineral pigment or filler of Smith 2005 is acicular or fibrous in form or that it may act as a reinforcing agent.

With respect to Smith 2002, Smith 2002 discloses a composite facer material that includes a nonwoven mat layer bonded to a laid scrim reinforcement layer made of continuous glass fibers. (See, e.g., paragraph [0015]). The layers are bonded together using an acrylic adhesive or polymer binder. (See, e.g., paragraph [0015]). However, Smith 2002 is completely silent as to the inclusion of an acicular man made fiber or fibrous reinforcement agent in the acrylic adhesive or polymer binder. As such, it is submitted that the combination of Smith 2005 and 2002 does not teach or suggest Applicants' invention as recited in amended claims 1 and 51.

In addition, Applicants respectfully submit that there is no motivation for one of skill in the art to arrive at the inventions recited in claims 1 and 51 based on the teachings of Smith 2005 and Smith 2002. To establish a *prima facie* case of obviousness, there must be some motivation, either within the reference or in the knowledge of those of skill in the art, to modify the reference or combine the references' teachings, there must be a reasonable expectation of success, and the prior art references must meet all of the claim limitations. (See, e.g., *Manual of Patent Examining Procedure*, Patent Publishing, LLC, Eighth Ed., Rev. 3, August 2005, §2142). One of ordinary skill in the art simply would not be motivated to make a gypsum facing material that includes a secondary binder resin (claim 1) or secondary coating (claim 51) applied to an open mesh filament network where the secondary binder resin includes at least one filler, at least one acicular man made fiber or fibrous reinforcing agent, and a fairly low glass transition organic binder because Smith 2005 and Smith 2002, as discussed above, are silent as to any teaching of the inclusion of an acicular man made fiber or fibrous reinforcement in a coating composition for a gypsum facing material.

Moreover, Applicants note that the subject matter of claims 13 and 14, namely, embodiments of the present invention in which the reinforcement agents are acicular or fibrous in form, were omitted from the rejected claims. This subject matter has been incorporated into both independent claims 1 and 51. Therefore, Applicants submit that claims 1 and 51 are patentable for this additional reason.

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In view of the above, Applicants respectfully submit that claims 1 and 51 are non-obvious and patentable over the cited references. Because claims 8 - 12, 15 - 21, and 23 - 28 are either directly or indirectly dependent upon claim 1 and claims 52 - 55, and 57 - 58 are either directly or indirectly dependent upon claim 51, and, as discussed above, claims 1 and 51 are not taught or suggested by Smith 2005 and Smith 2002, either alone or in combination, Applicants submit that claims 8 - 12, 15 - 21, 23 - 28, 52 - 55, and 57 - 58 are also not taught or suggested by the combination of Smith 2005 and Smith 2002. Applicants submit, therefore, that claims 1, 8 - 12, 15 - 21, 23 - 28, 51 - 55, and 57 - 58 are non-obvious and patentably distinguishable over Smith 2005 and Smith 2002.

In light of the above, Applicants submit that the present invention is not obvious over Smith 2005 in view of Smith 2002 and respectfully request that this rejection be reconsidered and withdrawn.

With respect to newly added claims 60 - 73, Applicants submit that Smith 2005 and Smith 2002 do not teach or suggest the gypsum facing material claimed in independent claim 60. In particular, Applicants submit that neither Smith 2005 nor Smith 2002 teach or suggest a secondary binder resin that contains acicular man made fibers or fibrous reinforcement agents or at least one filler in an amount of not more than 65% by weight. Smith 2005, for example, specifically teaches the presence of a filler material in an amount from 75 - 99% by weight. In fact, Applicants submit that this disclosure teaches away from the invention recited in claim 60. Smith 2002 is silent as to the inclusion of a filler material. As discussed above, without some teaching or suggestion, there can be no motivation to combine the references. Accordingly, Applicants submit that independent claim 60, and all claims dependent therefrom, are non-obvious and patentable over Smith 2005 and Smith 2002.

Rejection under 35 U.S.C. §103(a)

Claims 4 - 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2005/0202742 to Smith, *et al.* ("Smith 2005") in view of U.S. Patent Application No. 2002/0151240 to Smith, *et al.* ("Smith 2002") as applied above to claim 1 and further in view of U.S. Patent No. 6,176,920 to Murphy, *et al.* ("Murphy") or U.S. Patent Application No. 2005/0009428 to Porter, *et al.* ("Porter"). The Examiner admits that both Smith 2005 and Smith 2002 fail to disclose a binder resin that further includes a thermosetting resin and a crosslinking agent. In this regard, the Examiner asserts that

Murphy teaches a cementitious structural panel that includes a fiberglass mesh and a coating composition that includes crosslinking agents. In addition, the Examiner asserts that Porter teaches fabric reinforcement and cementitious boards faced with the same. The Examiner further asserts that Porter teaches that the fabrics can be a non-woven mesh coated with binder compositions that include a thermoset resin. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to have used Murphy's teaching of a crosslinking agent and Porter's teaching of a thermosetting resin in the gypsum facing panel of Smith 2005 and Smith 2002 to produce a gypsum board having increased weatherability and durability.

In response to this rejection, Applicants respectfully direct the Examiner's attention both to the amendments made to claim 1 and to the arguments presented above regarding amended claim 1 and submit that claim 1, as amended, defines a gypsum facing material that is not taught or suggested by Smith 2005 and Smith 2002, either alone or in combination. Because claims 4 - 6 directly depend from claim 1, which, as discussed above, is not taught or suggested by the combination of Smith 2005 and Smith 2002, Applicants submit that claims 4 - 6 are also not taught or suggested by Smith 2005 and Smith 2002. In addition, Applicants submit that the teachings of Murphy and Porter fail to make up for the deficiencies of Smith 2005 and Smith 2002, such as, for example, the teaching of a secondary binder resin applied to a randomly oriented open mesh filament network where the secondary binder resin includes a fairly low glass transition organic binder, at least one filler, and at least one reinforcing agent that may be acicular man made fibers and/or fibrous reinforcement agents. As a result, Applicants respectfully submit that claims 4 - 6 are non-obvious and patentable over the cited references and respectfully request that this rejection be reconsidered and withdrawn.

With respect to newly added claims 60 - 73, Applicants submit that Smith 2005 and Smith 2002 do not teach or suggest the gypsum facing material claimed in independent claim 60. In particular, Applicants submit that neither Smith 2005 nor Smith 2002 teach or suggest a secondary binder resin that contains acicular man made fibers or fibrous reinforcement agents or at least one filler in an amount of not more than 65% by weight. Smith 2005, for example, specifically teaches the presence of a filler material in an amount from 75 - 99% by weight. Applicants submit that this disclosure of Smith 2005 teaches away from the invention recited in claim 60. Both Smith 2002 and Murphy are silent as to the inclusion of a

filler material. In addition, Porter does not teach or suggest a secondary binder resin that contains a filler in an amount of not more than 65% by weight or acicular man made fibers or fibrous reinforcement agents. As discussed above, without some teaching or suggestion, there can be no motivation to combine the cited references. Accordingly, Applicants submit that independent claim 60, and all claims dependent therefrom, are non-obvious and patentable over Smith 2005 and Smith 2002 in view of Murphy and Porter.

Rejection under 35 U.S.C. §103(a)

Claim 13 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2005/0202742 to Smith, *et al.* ("Smith 2005") in view of U.S. Patent Application No. 2002/0151240 to Smith, *et al.* ("Smith 2002"), as applied to claim 1 above, and further in view of U.S. Patent No. 4,755,409 to Harkness ("Harkness"). In particular, the Examiner admits that Smith 2005 and Smith 2002 do not teach a fibrous reinforcing agent. The Examiner asserts that Harkness teaches a waterproofing laminate in which a reinforcing fabric, which can be a glass scrim, can be laminated to an elastomeric sheet that includes fillers such as wool and cotton fibers. The Examiner concludes that it would have been obvious to use the fibrous fillers of Harkness in the gypsum board facing material of Smith 2005 and Smith 2002 to create a material that has increased strength.

Initially, Applicants note that claim 13 has been canceled without prejudice, thereby rendering this rejection moot. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Applicants also note that the subject matter of claim 13 has been incorporated into independent claim 1. Applicants respectfully submit that claim 1 is not taught or suggested by the Examiner's cited references. In this regard, Applicants respectfully direct the Examiner's attention to the amendments made to claim 1 and submit that amended claim 1 defines a gypsum facing material that is not taught or suggested by the combination of Smith 2005, Smith 2002, and Harkness. With respect to Smith 2005 and 2002, Applicants submit that the pre-coated mat and coating composition disclosed by Smith 2005 and the composite facer material of Smith 2002 are discussed in detail above, and for purposes of brevity, will not be discussed in detail with respect to this rejection.

With respect to Harkness, Harkness teaches a waterproofing laminate for use in roofs, floors, or other surfaces. (*See, e.g.*, Abstract and column 1, lines 6 – 10). The laminate is

formed of layers of bitumen surrounding a reinforcing sheet. (*See, e.g.*, column 2, lines 45 – 47 and the Figure). The two layers of bitumen are each secured to a layer of compound bitumen. (*See, e.g.*, column 2, lines 47 – 48 and the Figure). An elastomeric sheet is secured to one compound bitumen layer and a release sheet is secured to the other compound bitumen layer. (*See, e.g.*, column 2, lines 48 – 51 and the Figure). The elastomeric sheet is exposed to the elements when the laminate is secured to a surface such as a roof. (*See, e.g.*, column 2, lines 51 – 53). It is preferred that the elastomeric sheet contain polyisobutylene, chlorinated polyethylene, natural rubber, polyvinyl chloride, or ethylene vinyl acetate. (*See, e.g.*, column 2, lines 63 – 67). The elastomeric sheet preferably contains particulate and fibrous fillers. (*See, e.g.*, column 3, lines 34 – 35). Preferred fibrous fillers are natural fibers including inorganic and mineral fibers, wool, cotton, and synthetic fibers such as nylon and polyester. (*See, e.g.*, column 3, lines 44 – 48). In addition, the elastomeric sheet may comprise or be laminated with a reinforcing fabric such as a woven or nonwoven polyester or glass scrim. (*See, e.g.*, column 4, lines 4 – 6).

Applicants respectfully submit that to evaluate the obviousness or non-obviousness of an invention, both the prior art reference(s) and the claimed invention as a whole must be considered. (*See, e.g.*, MPEP §2141.02 citing *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983) and *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983)). In the presently claimed invention, an aqueous secondary binder is applied to a randomly oriented open mesh filament network. The secondary binder includes at least one filler, acicular man made fibers or fibrous reinforcement agents, and a fairly low glass transition organic binder. Harkness, on the other hand, teaches fibrous fillers and reinforcing particulate fillers positioned in an external elastomeric layer that is preferably formed of polyvinyl chloride and which is part of a multi-laminate structure for building surfaces such as roofs. A separate reinforcing layer is also provided in the center of the laminate structure. In addition, Harkness teaches that the elastomeric layer provides a waterproofing function. Applicants submit that nowhere in Harkness is there a teaching or suggestion utilizing the fibrous fillers from the elastomeric layer (which is not a low glass transition binder as claimed) as the fibrous fillers in another medium, such an aqueous composition that contains at least one filler and an organic binder. Harkness specifically teaches fiber fillers located in a pre-formed, solid elastomeric layer affixed to a bitumen layer as part of a multi-laminate structure. (*See, e.g.*, column 3, line 67 – column 4, line 3).

Applicants respectfully submit that one of ordinary skill in the art would not glean from the teachings of Harkness to add the fibrous material of Harkness to an aqueous secondary binder composition that is applied to an open mesh filament network. The fibers of Harkness are part of a pre-formed layer of a multi-laminate structure for building materials and are not part of a composition for a facing material for gypsum. There is simply no suggestion anywhere within Harkness of adding the fibers within the solid elastomeric layer to an aqueous solution (*i.e.*, a secondary binder) applied to an open mesh filament network as claimed.

Additionally, Applicants respectfully submit that one of skill in the art cannot pick and choose elements (such as the fibers present in the elastomeric layer) from the cited reference(s) to arrive at the present invention. The fibers are part of a pre-formed layer of the multi-laminate structure. Further, as discussed above, there is no teaching or suggestion in Harkness of adding fibers to an aqueous solution. Harkness teaches fibers in an external layer of a multi-laminate structure. Without some teaching or suggestion of the claimed subject matter within the four corners of the cited references to inspire the skilled artisan to combine the teachings of the references, there can be no motivation to modify or combine the references. Therefore, Applicant submits that the claimed subject matter as a whole is not obvious over the teachings of Harkness.

Even assuming that the entire teachings of the references were considered and the references were combined, Applicants submit that the combination of the references would still not result in the presently claimed invention. For example, if the teachings of Harkness were added to the teachings of Smith 2005 and 2002, the result would be a separate layer of a polyvinyl chloride with fibers contained therein positioned on the open mesh filament network.

In view of the above, Applicants submit that claim 1 is not obvious over Smith 2005 and Smith 2002 in view of Harkness.

With respect to newly added claims 60 – 73, Applicants submit that Smith 2005 and Smith 2002 in view of Harkness do not teach or suggest the gypsum facing material claimed in independent claim 60. Harkness teaches incorporating fibrous fillers in an external elastomeric layer that is preferably formed of polyvinyl chloride and which is part of a multi-laminate structure for building surfaces such as roofs. In particular, and as discussed above, there is no teaching or suggestion within the four corners of Harkness of incorporating fibrous fillers into an aqueous composition that also contains a reinforcing agent and an

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organic binder as claimed in newly added claim 60. Without some teaching or suggestion, there can be no motivation to combine the references. Accordingly, Applicants submit that independent claim 60, and all claims dependent therefrom, are non-obvious and patentable over Smith 2005 and Smith 2002 in view of Harkness.

Rejection under 35 U.S.C. §103(a)

Claim 14 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2005/0202742 to Smith, *et al.* ("Smith 2005") in view of U.S. Patent Application No. 2002/0151240 to Smith, *et al.* ("Smith 2002"), as applied to claim 1 above, and further in view of U.S. Patent No. 5,395,438 to Baig, *et al.* ("Baig"). In particular, the Examiner admits that Smith 2005 and Smith 2002 do not teach an acicular reinforcing agent. The Examiner asserts that Baig discloses an acoustic tile composition that includes a binder and an inorganic filler (*i.e.*, tabular acicular gypsum) for texturability. The Examiner concludes that it would have been obvious to those ordinarily skilled in the art to use the acicular filler as the reinforcing agent in the gypsum board facing material of Smith 2005 and Smith 2002 to create a material that has greater retention throughout processing and improved texturability.

Initially, Applicants note that claim 14 has been canceled without prejudice, thereby rendering this rejection moot. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Applicants also note that the subject matter of claim 14 has been incorporated into independent claim 1. Applicants respectfully submit that claim 1 is not taught or suggested by the Examiner's cited references. In this regard, Applicants respectfully direct the Examiner's attention to the amendments made to claim 1 and submit that amended claim 1 defines a gypsum facing material that is not taught or suggested by the combination of Smith 2005, Smith 2002, and Baig. With respect to Smith 2005 and 2002, Applicants submit that the pre-coated mat and coating composition disclosed by Smith 2005 and the composite facer material of Smith 2002 are discussed in detail above, and for purposes of brevity, will not be discussed in detail with respect to this rejection. With respect to Baig, Baig discloses a mineral wool-free acoustical tile composition in which an expanded perlite is used to provide porosity and good sound absorption qualities. (*See, e.g.*, Abstract and column 2, lines 21 – 24 and 31 – 33). The expanded perlite is preferably combined with an inorganic filler. (*See,*

e.g., column 2, lines 24 – 26). The filler material has a marked effect on the texturability of the resultant pulp and is critical in providing a pulp which can be processed on equipment currently used to make acoustical tiles out of mineral wool pulp. (See, e.g., column 2, line 66 to column 3, line 2). The inorganic filler is preferably tabular acicular gypsum. (See, e.g., column 2, lines 53 – 54).

Applicants submit that the combination of Smith 2005, Smith 2002, and Baig does not teach or suggest acicular man made fibers as a reinforcement agent as required by amended claim 1. As amended, claim 1 requires that the coating composition contains a fairly low glass transition organic binder, at least one filler, and at least one acicular man made fiber or fibrous reinforcing agent. As discussed above with respect to the rejection of claims 1, 8 – 12, 15 – 21, 23 – 28, 51 – 55, and 57 – 59 under 35 U.S.C. §103(a) to Smith 2005 and Smith 2002, neither Smith 2005 nor Smith 2002 teach or suggest acicular man made fibers or fibrous reinforcement agents. Baig specifically teaches the use of a tabular acicular gypsum in the acoustical tile composition, which is not an acicular man made fiber. Baig is silent as to any teaching or suggestion of an acicular man made fiber. In addition, in the specification, Applicants teach that acicular man made fibers for use in the secondary coating include metallic wools, such as steel wools. (See, e.g., paragraph [0041]). However, Baig teaches that the acoustical tile composition does not contain mineral wool. (See, e.g., column 1, lines 9 – 11 and 56 – 57). Thus, it is submitted that Baig teaches away from the presently claimed invention in which the reinforcement agent in the secondary coating includes acicular man made fibers such as steel wool. Thus, it is submitted that the combination of Smith 2005, Smith 2002, and Baig does not teach or suggest Applicants' invention as recited in amended claim 1.

In addition, Applicants respectfully submit that there is no motivation for one of skill in the art to arrive at the invention recited in claim 1 based on the teachings of Smith 2005, Smith 2002, and Baig. To establish a *prima facie* case of obviousness, there must be some motivation, either within the reference or in the knowledge of those of skill in the art, to modify the reference or combine the references' teachings, there must be a reasonable expectation of success, and the prior art references must meet all of the claim limitations. (See, e.g., *Manual of Patent Examining Procedure*, Patent Publishing, LLC, Eighth Ed., Rev. 3, August 2005, §2142). One of ordinary skill in the art simply would not be motivated to make a gypsum facing material that includes a secondary binder resin applied to an open

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mesh filament network where the secondary binder resin includes at least one filler, at least one acicular man made fiber or fibrous reinforcing agent, and a fairly low glass transition organic binder because Baig, as discussed above, teaches away from the inclusion of an acicular man made fiber in a coating composition for a gypsum facing material.

In view of the above, Applicants submit that claim 1 is not obvious over Smith 2005 and Smith 2002 in view of Baig.

With respect to newly added claims 60 – 73, Applicants submit that Smith 2005 and Smith 2002 in view of Baig do not teach or suggest the gypsum facing material claimed in independent claim 60. In particular, and as discussed above, there is no teaching or suggestion within the four corners of Baig of does not teach or suggest acicular man made fibers as a reinforcement agent as required by newly added claim 60. In fact, as discussed above, Baig teaches away from acicular man-made fibers. Without some teaching or suggestion, there can be no motivation to combine the references. Therefore, Applicants submit that independent claim 60, and all claims dependent therefrom, are non-obvious and patentable over Smith 2005 and Smith 2002 in view of Baig.

Rejection under 35 U.S.C. §103(a)

Claim 22 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application No. 2005/0202742 to Smith, *et al.* ("Smith 2005") in view of U.S. Patent Application No. 2002/0151240 to Smith, *et al.* ("Smith 2002"), as applied to claim 1 above, and further in view of U.S. Patent No. 4,394,414 to Brown *et al.* ("Brown"). The Examiner admits that Smith 2005 and Smith 2002 do not teach that the glass strands include a sizing composition. Brown is cited as disclosing an aqueous sizing composition for glass fibers. The Examiner asserts that the sized wet chopped glass fiber strands have good flowability and provides a mat with good flexibility and tensile strength. The Examiner concludes that it would have been obvious to one of ordinary skill in the art to have used Brown's sizing composition on the chopped glass strands of Smith 2005 and Smith 2002 to create a mat that has good flexibility and tensile strength.

In response to this rejection, Applicants respectfully direct the Examiner's attention both to the amendments made to claim 1 and to the arguments presented above regarding amended claim 1 and submit that claim 1, as amended, defines a gypsum facing material that is not taught or suggested by Smith 2005 and Smith 2002, either alone or in combination.

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Because claim 22 is directly dependent upon claim 1, which, as discussed above, is not taught or suggested by the combination of Smith 2005 and Smith 2002, Applicants submit that claim 22 is also not taught or suggested by Smith 2005 and Smith 2002. In addition, Applicants submit that the teachings of Brown fail to make up for the deficiencies of Smith 2005 and Smith 2002, namely, the teaching of a secondary binder resin that includes at least one filler, at least one acicular man made fiber and/or fibrous reinforcing agent(s), and a fairly low glass transition organic binder. As a result, Applicants respectfully submit that claim 22 is non-obvious and patentable over the cited references and respectfully request reconsideration and withdrawal of this rejection.

With respect to newly added claims 60 – 73, Applicants submit that Smith 2005 and Smith 2002 do not teach or suggest the gypsum facing material claimed in independent claim 60. In particular, Applicants submit that neither Smith 2005 nor Smith 2002 teach or suggest a secondary binder resin that contains acicular man made fibers or fibrous reinforcement agents and at least one filler in an amount of not more than 65% by weight. Smith 2005, for example, specifically teaches the presence of a filler material in an amount from 75 – 99% by weight. Applicants submit that this disclosure teaches away from the invention recited in claim 60. Smith 2002 is silent as to the inclusion of acicular man made fibers, fibrous reinforcement agents, and a filler material. In addition, Applicants submit that the teachings of Brown fail to make up for the deficiencies of Smith 2005 and Smith 2002, namely, Brown does not teach or suggest a secondary binder resin that contains a filler in an amount of not more than 65% by weight or acicular man made fibers or fibrous reinforcement agents. As discussed above, without some teaching or suggestion, there can be no motivation to combine the cited references. Further, Applicants submit that the combination of the references would not result in the presently claimed invention due to the lack of any teaching of acicular man made fibers or fibrous reinforcement agents within the cited references. Accordingly, Applicants submit that independent claim 60, and all claims dependent therefrom, are non-obvious and patentable over Smith 2005 and Smith 2002 in view of Brown.

Conclusion

In light of the above, Applicants believe that this application is now in condition for allowance and, therefore, request favorable consideration.

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If any points remain in issue which the Office feels may be best resolved through a personal or telephone interview, the Office is kindly requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 50-0568 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Date: July 20, 2006

Respectfully submitted,

Margaret S. Millikin
Margaret S. Millikin
Registration No. 38,969

Owens Corning
Patent Department, Bldg. 11
2790 Columbus Road
Granville, Ohio 43023
(740) 321-7173

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